

**U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE**

**Region 11 MO
Rev. Jan. 2009**

**QUALITY ASSURANCE WORKSHEET FOR
MLRA SOIL SURVEYS**

_____ **MLRA Project Area – a subset of**
MLRA(s)_____

MLRA-SSO:

REVIEW TYPE:

DATE:

This quality assurance report is to ensure that: the soil survey is science-based; that the legend and correlation use the MLRA concept; and that the survey meets the standards and specifications of the National Cooperative Soil Survey.

All negative responses identified in this report must be adequately addressed in a narrative (see item 10.11).

1.0 GENERAL INFORMATION and SCHEDULING

- 1.1 Agency in charge of survey:
- 1.2 Cooperating agencies:
- 1.3 Survey team (name, title, agency):
- 1.4 Total acres (land, census water):
- 1.5 Acres updated/remapped and percent of survey:
- 1.6 List quality assurance reviews (type, date):
- 1.7 Scheduled date - next quality assurance review:
- 1.8 Scheduled date - project completion:
- 1.9 Participants at this review (name, title, agency):

2.0 MANAGEMENT ISSUES

- 2.1 Are deficiencies and agreed-to items stated in previous Quality Assurance Reviews satisfied?
- 2.2 Are management-related documents current (e.g., long-range plan, project plan, and annual plan of operations; standards of performance, individual training plans)?

- 2.3 Are any management concerns associated with this survey?
- 2.4 Is the survey party accessing and using the latest versions of the NSSH, Keys to Soil Taxonomy, Region 11 MLRA Regional Office technical notes and other guidance documents, past quality assurance reports, and other relevant documents?
- 2.5 Is the information in the soil survey schedule correct?
- 2.6 Are there any specific technical training needs of the soil survey staff not already identified by the local staff as part of their development plans? (If yes, please specify the training needs.)

3.0 CORRELATION

One legend is maintained for the survey containing the provisional and the approved map units for the MLRA. The legend is the official, progressively correlated subset legend of the MLRA. The map units in the legend have been approved by the Region 11 MLRA Regional Office. The legend contains “provisional” map units that are being mapped but that have insufficient acreage or documentation. The type and amount of documentation required for the map units to become approved depends on the complexity of the map unit, existing documentation for the map unit within the MLRA, and previous correlation decisions.

Attach the legend (see item 10.1). Attach a list of map units added, dropped, or changed since the last review (see item 10.2). Attach the conversion legend (see item 10.3). Attach a summary of the documentation gathered (see item 10.4) and attach a narrative of the field stops seen on this review (see item 10.5).

- 3.1 Do all project members and participants understand the concept of map units, data mapunits, and the MLRA process?
- 3.2 Is documentation sufficient for approved data mapunits on the legend?
- 3.3 Do all new components (series) of map units to be added to the legend classify properly in accordance with current soil taxonomy?
- 3.4 Are the properties (at least the representative values) of all new components of map units as mapped in the survey area within the range of the named series?
- 3.5 Is the official soil series description up-to-date for all series used in the survey area (georeferenced, classification current, metric units of measure, horizon nomenclature current, competing series current, diagnostic horizons and features listed)?
- 3.6 Have names for new series been reserved and a description uploaded to the OSD database?
- 3.7 Are the map unit names and design consistent with the purpose and scale of the MLRA soil survey area?
- 3.8 Are all proposed changes in the legend recorded and reported in the appropriate NASIS tables?
- 3.9 Is a strategy in-place for gathering documentation and are there instructions as to kind and quality of field notes needed?

- 3.10 Are the pedon descriptions stored in NASIS?
- 3.11 Are field notes, transect data, and laboratory data summarized regularly?
- 3.12 Is a conversion legend generated? Is it up-to-date?

The project leader is responsible for updating the section "Notes to Accompany Classification and Correlation of the Soils." Refer to NSSH exhibit 609-1, item 17 for an example. Attach the notes or the plans for developing this document (see item 10.6).

4.0 SOIL INVESTIGATIONS

- 4.1 Is a soil investigation work plan prepared and approved by the Region 11 MLRA Regional Office?
- 4.2 Is the soil classification of lab data current with soil taxonomy?
- 4.3 Are pedons properly classified? Is the disposition of the laboratory data given and provisions made to update the laboratory database?

The project leader is responsible for updating the section "Classification of Pedons Sampled for Laboratory Analysis." Refer to NSSH exhibit 609-1, item 15 for an example. Attach the document or plans for developing this document (see item 10.7).

5.0 SUPPLEMENTAL SOIL MAPPING

If applicable, describe in a narrative the process used by the MLRA soil survey office to ensure quality control of supplemental mapping and approval by the project leader (see item 10.8).

Describe in a narrative the process used by the MLRA soil survey office to ensure an exact join as described in NSSH, Part 609.03 (see item 10.9)?

- 5.1 List the spatial data reviewed:
- 5.2 Is supplemental mapping consistent throughout the subset and MLRA?
- 5.3 Does the map unit design represent the landscape/landform position, and other information in the data mapunit?
- 5.4 Do map unit boundaries generally conform to landscape features and other features visible on the imagery?
- 5.5 Is the level of detail in mapping consistent and does the level of detail conform to the objectives of the project plan?
- 5.6 Is Features and Symbol Legend for Soil Survey 37A (exhibit 627-5) applied properly and consistently?
- 5.7 Is the 37A current and are major/minor codes completed?
- 5.8 Are all ad hoc features clearly defined?

- 5.9 Are typical pedons located in a delineation with the component named?
- 5.10 Are typifying pedons accurately georeferenced?
- 5.11 Is a progress map maintained?
- 5.12 Is the provisional *Digital General Soil Map of the U.S.* (STATSGO) map concurrent with mapping?

6.0 SSURGO DEVELOPMENT and REVISIONS

- 6.1 Do digitized map unit delineations and their symbols match across project boundaries? Has an exact join been achieved with adjacent MLRA project surveys?
- 6.2 Do plans ensure a 100% edit of the digitizing prior to sending the files to the Region 11 MLRA Regional Office for quality assurance and digitizing certification?

7.0 NASIS and DATABASES

- 7.1 Are data elements for all map unit components (including miscellaneous areas as appropriate) being populated sufficiently with data to meet nationally mandated requirements as well as state and local needs?

Attach plans to populate the database. Include NASIS training received and training needed for all project members, along with the staff member(s) who have responsibility for editing (see item 10.10).

8.0 INTERPRETATIONS

- 8.1 Are existing interpretations consistent with the purposes of the survey as described in the project plan?
- 8.2 Are interpretive ratings being reviewed and tested?
- 8.3 What special interpretations or interpretive tables are needed?
- 8.4 What assistance have other disciplines provided or scheduled for making, testing, and coordinating interpretations?
- 8.5 What soil performance data (e.g., crop yields, site indices) are collected and how?

9.0 MISCELLANEOUS ISSUES

- 9.1 What are the roles and responsibilities of the resource soil scientist(s) with this project? Conversely, what are the roles and responsibilities of the survey party with the resource soil scientist(s)?
- 9.2 What input and involvement is there from soil survey partners?
- 9.3 Describe the survey party's involvement with technical soil services (i.e., CRP, soil quality, FOTG, on-site investigations, etc.).

Appendix V

- 9.4 What are the plans for the state certifying and updating the field office technical guide?
- 9.5 What are the plans to update the *Digital General Soil Map of the U.S.* (STATSGO) when the project is completed?
- 9.6 Other issues. Attach narrative if needed (see item 10.11).

10.0 ATTACHMENTS AND NARRATIVES

- 10.1 Legend
- 10.2 List the map units added, dropped, or changed
- 10.3 Conversion legend
- 10.4 Summary of documentation
- 10.5 Field Stops report
- 10.6 Notes to accompany classification and correlation of the soils
- 10.7 Classification of pedons sampled for laboratory analysis
- 10.8 Narrative for quality control of supplemental mapping (if applicable)
- 10.9 Narrative for achieving an exact join
- 10.10 Plans to populate the database; NASIS training received and needed
- 10.11 Narrative for any negative responses identified or issues not addressed in this report
- 10.12 Commendable items
- 10.13 Recommended or significant items
- 10.14 Action items (agreed-to items)

11.0 SIGNATURE PAGE

We, the undersigned, have reviewed this report and concur with its findings.

MLRA Soil Survey Office Leader Date

Soil Data Quality Specialist Date

NCSS Partner(s) Date

State Soil Scientist Date

State Soil Scientist Date

CERTIFICATION

As of _____, this soil survey meets the standards and specifications of the National Cooperative Soil Survey. The survey is science-based and the legend and correlation use the MLRA concept.

Region 11 MLRA Regional Office Leader